

K2: Extending Kepler's Power to the Ecliptic

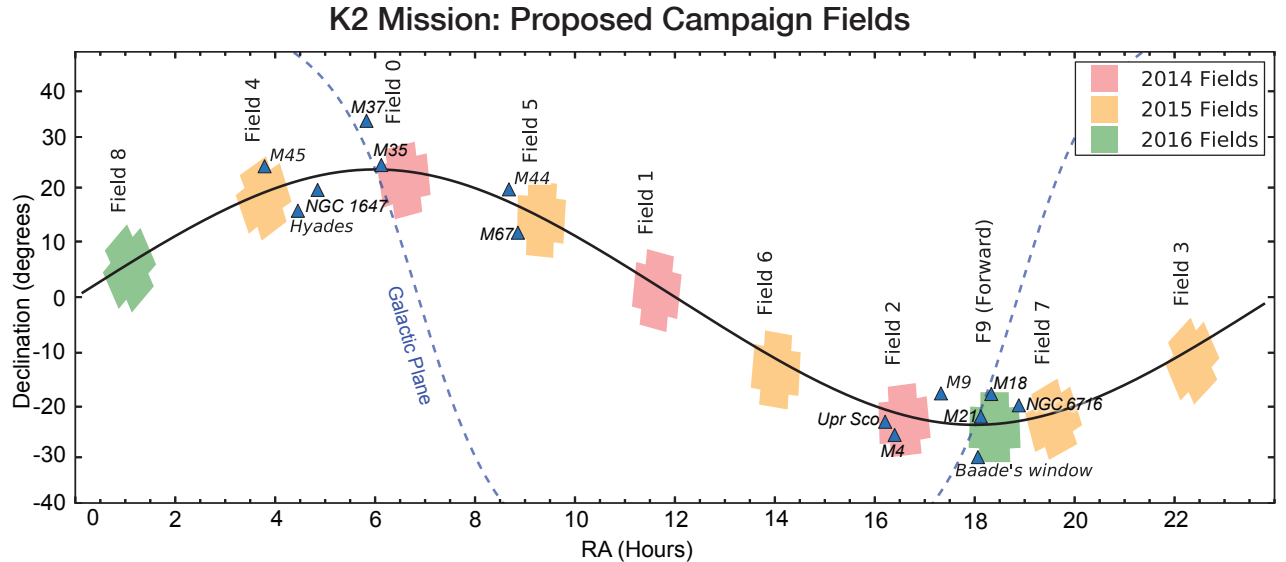
K2 Guest Observer Program: Opportunities for Science Programs and Research Funding

K2 Mission

K2 repurposes the space-borne hardware and ground-based operations of the Kepler mission for a pointed survey of pre-determined locations along the ecliptic plane. The single, visible-wavelength instrument onboard K2 provides high-precision photometry capability, with short cadence and long cadence modes (1 minute and 30 minute exposures), and a powerful tool for variability analyses of planetary, stellar, extragalactic and solar system sources.

Performance

In June 2014, K2 became fully operational, obtaining a photometric precision approaching closely that of the Kepler hardware it has inherited. In order to maintain this precision with two operating reaction wheels, K2 is confined to observing in the ecliptic plane, where the effects of solar pressure upon pointing drift are minimized and mitigated by a combination of reaction wheel and thruster control. Each ecliptic campaign is limited by sun constraints to a duration of ~75 d. 4-5 campaigns will be completed during each 372-d orbit of the



spacecraft. K2 achieves a benchmark photometric precision on a $m_v = 12$ G2V star of 170 parts-per-million (ppm) in 30 minutes of integration. This corresponds to 50 ppm over a 6.5-hour transit of an Earth-sized body around that star.

Guest Observer Program

All K2 targets are proposed by the community through the GO program. There are no guaranteed,

or pre-determined, targets for K2 campaigns, and no restrictions on proposed targets or proposed science. The K2 mission welcomes all proposals including, but not exclusive to, exoplanet, stellar, extragalactic and solar system science. Guest Observer research grants up to \$100,000 per proposal are available to successful proposers. There will be approximately 2 GO proposal calls per year. There is no exclusive-use period for collected data. Data distribution and archival services will be performed by the Mikulski Archive for Space Telescopes (archive.stsci.edu/k2) and the NASA Exoplanet Archive (exoplanetarchive.ipac.caltech.edu). All data collected by K2 will be accessible and free within the archives. Follow the K2 URL below to identify proposal deadlines and guidelines, mission description and performance reports.

For more information and updates, visit keplerscience.arc.nasa.gov/K2

K2 Campaign Fields: 2014-2016					
Field	Start	Stop	RA (J2000)	Dec (J2000)	Comments
0	2014 Mar 08	2014 May 30	06 33 11.14	+21 35 16.4	Near Galactic Anti-center, M35, NGC 2158
1	2014 May 30	2014 Aug 21	11 35 45.51	+01 25 02.3	North Galactic Cap
2	2014 Aug 17	2014 Nov 13	16 24 30.34	-22 26 50.3	Near Galactic Center, M4, M80, M19, Upr Sco, rho Oph
3	2014 Nov 13	2015 Feb 04	22 26 39.68	-11 05 48.0	South Galactic Cap, Neptune
4	2015 Feb 07	2015 Apr 24	03 56 18.22	+18 39 38.1	Pleiades, Hyades
5	2015 Apr 26	2015 Jul 11	08 40 37.84	+16 49 46.6	Beehive Cluster, M67
*6	2015 Jul 10	2015 Oct 11	14 01 11.20	-13 16 02.0	North Galactic Cap
*7	2015 Oct 12	2016 Jan 15	19 34 16.22	-22 38 23.4	Near Galactic Center, NGC 6717
*8	2016 Jan 16	2016 Mar 24	01 04 43.18	+05 11 52.2	South Galactic Cap
*9 (Forward)	2016 Mar 25	2016 Jun 17	18 23 35.72	-24 12 12.8	Galactic Center, Baades Window, M21, M18, M25, M8

* Suggested locations only (rows 6, 7, 8, 9) - input from community requested